

**IN THE SPECIFICATION:**

Page 11, lines 11-20:

Either of the optical axis of an incident beam 105 and the optical axis of an emergent beam 106 is present in a plane which is orthogonal to the direction of orientation of the liquid crystal molecules, and makes a predetermined angle  $\theta$  (109) with respect to a direction normal to the reflection substrate 102. The polarized state of the incident beam is p-polarization or s-polarization with respect to the transparent substrate 103. The polarized state 107p of the incident beam shown in Fig. 1a is p-polarization.

Page 11, line 21 through page 12, line 21:

If no voltage is applied to the liquid crystal layer or if the applied voltage is extremely low, birefringence is small since the anisotropy with respect to the polarization of the incident beam is relatively small, and accordingly, the polarized state of the incident light beam is substantially maintained on the emergent side. In this case, since the cross Nicol configuration is taken as mentioned above, the emergent beam is absorbed so as to effect a dark expression (black expression) if a polarizing plate is used as a polarizing element on the emergent side. Meanwhile, if a voltage is applied to the liquid crystal layer, the liquid crystal molecules are inclined ( $\theta_{LC}$  (110) is increased), as shown in Fig. 1b, so as to cause anisotropy with respect to the incident polarization, and accordingly, the birefringence varies so as to modulate the polarized state of the incident beam, resulting in a change in the

volume of light passing through the polarizing plate on the emergent side. As the voltage applied to the liquid crystal layer is increased, the volume of light passing through the polarizing plate on the emergent side is changed, and accordingly, a maximum transmission rate is exhibited at a predetermined drive voltage. As mentioned above, this display system is a normally black type which can effect a dark expression if no voltage is applied to the liquid crystal layer or if the applied voltage is extremely low, but can effect a bright expression at a predetermined voltage.

Page 14, line 8 through page 15, line 2:

In a conventional liquid crystal display system having a twist-nematic mode or the like which is used in general, a desired phase modulation is made for an incident beam by switching the inclined angle of liquid crystal molecules between substantially 0 deg. and 90 deg. with respect to the substrate so as to effect brightness modulation in combination with a polarizing plate. A relatively high voltage, that is, several volts are required in order to set the inclination angle of the liquid crystal molecules to 90 deg. with respect to the substrate. This fact causes the drive voltage of the conventional liquid crystal display system to be high. Meanwhile, according to the present invention, the inclined angle of the liquid crystal molecules which is required for obtaining a desired phase modulation is about 45 deg. with respect to the substrate. A voltage of ~~but~~ about 2 volts is satisfactory for inclining the liquid crystal molecules by an angle of about 45 deg. with respect to the substrate, and accordingly, the liquid crystal display system according to the present

invention can greatly reduce the drive voltage in comparison with the conventional liquid crystal display system.

Page 20, lines 3-21:

(Embodiment 5)

Fig. 7 is a view for explaining an embodiment 5. The ~~emefent~~ emergent side surface of a hexahedron prism 112 is coated thereover with a high reflectance metal such as aluminum or silver so as to obtain a reflection surface 130. ~~Wt~~ With this arrangement, the following advantage can be obtained: Incidentally, a Brown tube has the so-called peak brightness function which can increase the white brightness of a bright white image contained in a dark image in part, to a value higher than that of a normal white brightness in order to effectively exhibit an image which has a high brightness ratio within a screen which displays a light which shines in dark, an ocean on which the sunlight is brilliant or the like. However, with a conventional liquid crystal display unit, the materialization of the peak brightness has been difficult since the maximum brightness of the liquid crystal display is limited by the brightness of a light source.

Page 26, line 20 through page 27, line 1:

A white light beam 208 emitted from the light source 201 is ~~aplit~~ split into a blue light beam 209 and a yellow light beam 210, and the blue light beam 209 is incident upon the panel 100B by way of the hexahedron prism 112B. Meanwhile, the yellow light beam 203 is separated into a red light beam 211 and the green light beam 212 by means of the dichroic mirror 205 through the intermediary of the mirror

203 and the lens 204, which are then incident upon the panels 100R, 100B, respectively.

Page 30, line 21 through page 31, line 6:

(Embodiment 12)

Figs. 15 to 18 is a view for explaining an embodiment of a three panel type projection optical system which is a display unit using the liquid crystal display element according to the present invention. The projection optical system in this embodiment is composed of a color separating optical system consisting of a light source 201, dichroic ~~mirrors~~ mirrors 202, 205, a mirror 203 and a lens 204, panels 100R, 100G, 100B for respective three primary colors RGB, a cross-dichroic prism 206, hexahedron prisms 112R, 112G, 112B located between the respective panels 100R, 100G, 100B and, the cross-dichroic prism 206, a projection lens 207, and the like.